AMENDMENTS (IF ANY) TO THE CLAIMS

This listing of claims replaces all prior claim versions.

LISTING OF CLAIMS

Amend as indicated:

1. (presently further amended) A sensor for capacitively measuring the distance to a stationary or passing object comprising:

a sensor assembly having an electrode for capacitively coupling with the object, a shield that surrounds the electrode and is electrically isolated from the electrode by an insulating layer, and a housing that substantially surrounds the electrode and the shield;

a first electrically conductive bridge connected to the electrode and connectable to a first conductor of a transmission cable;

a second electrically conductive bridge connected to the shield and connectable to a second conductor of the transmission cable; and

a third electrically conductive bridge connected to the housing and connectable to a third conductor of the transmission cable;

wherein the electrode and the shield are formed entirely from an electrically conductive ceramic material and the insulating layer and the housing are formed entirely from an electrically non-conductive ceramic

material such that the sensor assembly is formed entirely from ceramic materials, and in that the electrically conductive and electrically non-conductive ceramic materials are selected to have substantially similar thermal expansion coefficients, such that the sensor assembly remains virtually stress free at high operating temperatures.

2. (presently amended) A sensor according to claim 1, wherein the shield ~~(105)~~ is formed from a solid piece of electrically conductive ceramic.

3. (presently amended) A sensor according to claim 1, wherein the shield ~~(105a)~~ is a deposited electrically conductive ceramic layer.

4. (presently amended) A sensor according to claim 3, wherein the shield ~~(105a)~~ is deposited onto the inside surface of the housing ~~(106)~~.

5. (deleted)

6. (presently amended) A sensor according to claim 5, wherein the first electrically conductive bridge ~~(107)~~ passes through apertures provided in the housing ~~(106)~~ and the second electrically conductive bridge ~~(109)~~.

7. (presently amended) A sensor according to claim 5, wherein the second electrically conductive bridge ~~(109)~~ substantially surrounds the housing ~~(106)~~.

8. (presently amended) A sensor according to claim 6, wherein the second electrically conductive bridge ~~(109)~~ substantially surrounds the housing ~~(106)~~.

9. (presently amended) A sensor according to claim 5, further comprising an adaptor ~~(30, 40)~~ for connecting the second electrically conductive bridge ~~(109)~~ to the conductor of a transmission cable.

10. (deleted)

11. (presently amended) A sensor according to claim 10, wherein the first electrically conductive bridge ~~(107)~~ passes through apertures provided in the insulating layer ~~(104)~~, the shield ~~(105)~~, the third electrically conductive bridge ~~(109)~~, the housing ~~(106)~~ and the second electrically conductive bridge ~~(111)~~, and wherein the third electrically conductive bridge ~~(109)~~ passes through apertures provided in the housing ~~(106)~~ and the second electrically conductive bridge ~~(111)~~.

12. (presently amended) A sensor according to claim 10, further comprising an adaptor ~~(60,70)~~ for connecting the second electrically conductive bridge ~~(111)~~ to the conductor of a transmission cable and the third

electrically conductive bridge ~~(109)~~ to the conductor of a transmission cable.

13. (presently amended) A sensor according to claim 11, further comprising an adaptor ~~(60,70)~~ for connecting the second electrically conductive bridge ~~(111)~~ to the conductor of a transmission cable and the third electrically conductive bridge ~~(109)~~ to the conductor of a transmission cable.

14. (presently amended) A sensor according to claim 1, wherein one or more of the electrode ~~(102)~~, shield ~~(105)~~, insulating layer ~~(104)~~ and housing ~~(106)~~ are bonded together.

15. (presently amended) A sensor according to claim 14, wherein the bonding provides a hermetic seal between the one or more of the electrode ~~(102)~~, shield ~~(105)~~, insulating layer ~~(104)~~ and housing ~~(106)~~.